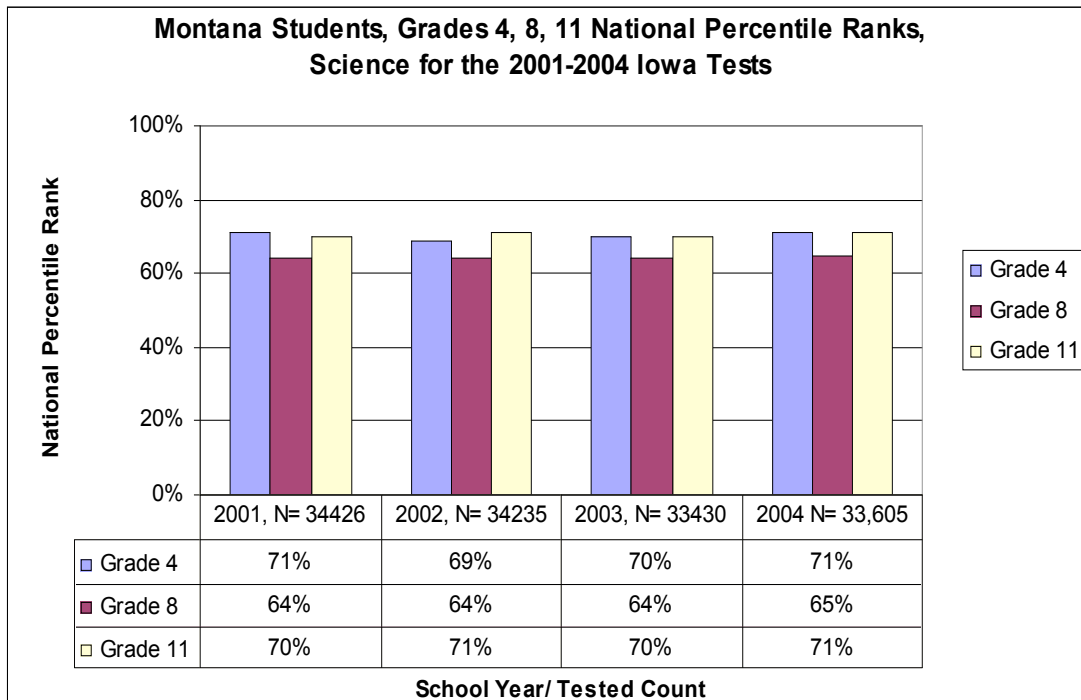


## Science, Grades 4, 8, and 11

**Chart 1: 4, 8, 11 SC**

The chart below shows the National Percentile Ranks for grades 4, 8, and 11.

- In 2001, grade 4 scored an NPR of 71%, grade 8 an NPR of 64%, and grade 11 an NPR of 70%.
- The 2002 NPR for grade 4 dropped slightly to 69% while the grade 11 increased slightly. Grade 8 scores remained the same as 2001.
- In 2003, the NPR for grade 4 increased slightly while remaining the same for grade 8 and decreasing slightly for grade 11.
- In 2004, the NPR for grades 4, 8, and 11 increased slightly.



**Table 1: 4, 8, 11 SC**

Science National Percentile Rank for each disaggregation across Montana in 2001, 2002, 2003, and 2004.

Groups	Grade 4				Grade 8				Grade 11			
	2001	2002	2003	2004	2001	2002	2003	2004	2001	2002	2003	2004
All Students	71%	69%	70%	71%	64%	64%	64%	65%	70%	71%	70%	71%
Students Without Disabilities	72%	71%	72%	73%	67%	68%	67%	68%	72%	73%	73%	73%
Students With Disabilities	50%	46%	51%	55%	36%	34%	35%	37%	32%	34%	34%	34%
Female Students	70%	68%	70%	70%	65%	66%	66%	66%	72%	73%	73%	72%
Male Students	72%	70%	70%	72%	63%	63%	62%	64%	67%	68%	68%	69%
Native American Students	50%	49%	48%	52%	42%	41%	43%	43%	51%	48%	46%	47%
White Students	73%	72%	73%	74%	67%	68%	67%	68%	71%	72%	73%	73%
Students on Free/Reduced Lunch	59%	58%	60%	61%	53%	53%	52%	55%	58%	58%	59%	58%
ITED*	N/A	250%	220%	410%	N/A	220%	200%	200%	N/A	400%	410%	270%

\* LEP 2001 data were incomplete.

**Table 2: 4, 8, 11 SC**

Science: The table below shows the percentage of students for each disaggregation scoring in each performance category in grades 4, 8, and 11 for 2001, 2002, 2003, and 2004.

Groups/Year		Grade 4				Grade 8				Grade 11			
		Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3	Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3	Advanced Stanines 8-9	Proficient Stanines 5-7	NP Stanines 4	Novice Stanines 1-3
All Students	2001	22%	60%	10%	8%	18%	60%	12%	10%	21%	60%	9%	10%
	2002	21%	60%	10%	9%	18%	59%	12%	11%	23%	58%	9%	10%
	2003	22%	60%	10%	8%	17%	60%	12%	11%	22%	59%	9%	10%
	2004	23%	61%	10%	6%	17%	62%	12%	9%	23%	58%	9%	10%
Students Without Disabilities	2001	24%	61%	9%	7%	20%	62%	11%	7%	22%	62%	8%	8%
	2002	22%	61%	10%	7%	19%	62%	11%	8%	25%	60%	7%	8%
	2003	23%	61%	9%	7%	19%	62%	11%	8%	24%	61%	8%	8%
	2004	24%	62%	9%	5%	19%	65%	10%	7%	25%	60%	7%	8%
Students With Disabilities	2001	8%	53%	20%	19%	3%	37%	24%	37%	2%	39%	21%	38%
	2002	6%	51%	20%	23%	3%	34%	25%	38%	2%	39%	23%	36%
	2003	8%	53%	20%	19%	2%	39%	23%	36%	3%	39%	22%	36%
	2004	9%	56%	19%	16%	3%	38%	27%	32%	3%	39%	22%	36%
Female Students	2001	21%	61%	10%	8%	16%	65%	11%	8%	21%	64%	8%	7%
	2002	19%	62%	11%	8%	17%	63%	11%	9%	23%	62%	8%	7%
	2003	21%	62%	10%	7%	17%	63%	12%	8%	22%	63%	8%	7%
	2004	20%	63%	10%	6%	16%	65%	12%	7%	22%	62%	8%	8%
Male Students	2001	24%	59%	9%	8%	20%	55%	12%	12%	21%	57%	10%	12%
	2002	22%	58%	11%	9%	18%	56%	13%	13%	23%	55%	9%	13%
	2003	22%	59%	10%	9%	17%	57%	13%	13%	22%	55%	10%	13%
	2004	25%	59%	10%	6%	18%	58%	12%	12%	24%	54%	9%	13%
Native American Students	2001	8%	52%	20%	20%	4%	46%	21%	29%	7%	55%	18%	19%
	2002	6%	55%	20%	19%	4%	44%	24%	28%	7%	57%	13%	23%
	2003	6%	52%	21%	21%	5%	48%	21%	25%	6%	54%	17%	23%
	2004	8%	56%	20%	16%	4%	51%	21%	24%	6%	55%	17%	22%
White Students	2001	20%	60%	18%	2%	20%	62%	11%	8%	22%	61%	8%	9%
	2002	23%	62%	8%	7%	20%	62%	10%	8%	25%	59%	7%	9%
	2003	24%	61%	9%	6%	19%	62%	11%	8%	24%	59%	8%	8%
	2004	25%	62%	9%	5%	19%	63%	11%	7%	25%	58%	8%	9%
Students on Free/ Reduced Lunch	2001	14%	52%	18%	16%	8%	55%	18%	18%	11%	59%	14%	16%
	2002	12%	60%	14%	14%	8%	55%	18%	19%	13%	58%	12%	17%
	2003	12%	61%	15%	13%	8%	55%	18%	19%	12%	60%	12%	16%
	2004	13%	62%	15%	10%	9%	58%	16%	16%	13%	57%	13%	17%
	2001	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na	Na
	2002	1%	46%	24%	29%	1%	33%	30%	36%	4%	49%	16%	31%

\*LEP 2001 data were incomplete.

**Table 3: 4, 8, 11 SC**

Customized Skills Reports: Montana Science Standards tested in the 2001, 2002, 2003, and 2004 Iowa Tests

Standard			Design, conduct, evaluate and communicate investigations	Understand physical and chemical systems	Understand the structures and functions of living things	Understand Earth’s systems and interactions	Understand the impact of science and technology on society
Grade 4	# of Items		19	5*	10	8	2*
	Percent Correct	01	60%	69%	67%	67%	58%
		02	60%	68%	66%	66%	58%
		03	61%	67%	66%	68%	57%
		04	62%	67%	67%	69%	58%
Grade 8	# of Items		28	14	7	8*	3*
	Percent Correct	01	68%	65%	59%	59%	55%
		02	67%	65%	58%	59%	55%
		03	67%	65%	58%	58%	54%
		04	68%	65%	59%	58%	54%
Grade 11	# of Items		45	9*	5*	1*	1*
	Percent Correct	01	56%	53%	59%	64%	61%
		02	57%	53%	59%	63%	60%
		03	56%	53%	59%	64%	61%
		04	57%	52%	60%	64%	60%
* The Iowa Tests measure the knowledge dimension of the Montana Standard, but do not adequately measure the application aspect.							

**Tables 4a and 4b: 11 SC**

ACT Science Reasoning results for the high school graduating classes of 2001, 2002, and 2003. Information for the graduating class of 2004 unavailable at the time of printing.

	<b>Average Score All National</b>	<b>Average Score All Montana</b>	<b>Average Score White Montana</b>	<b>Average Score Native American Montana</b>
2001	21.0	21.9	22.1	18.4
2002	20.8	21.8	21.9	18.25
2003	20.8	21.7	22.0	18.5

Number of Montana students participating in the ACT

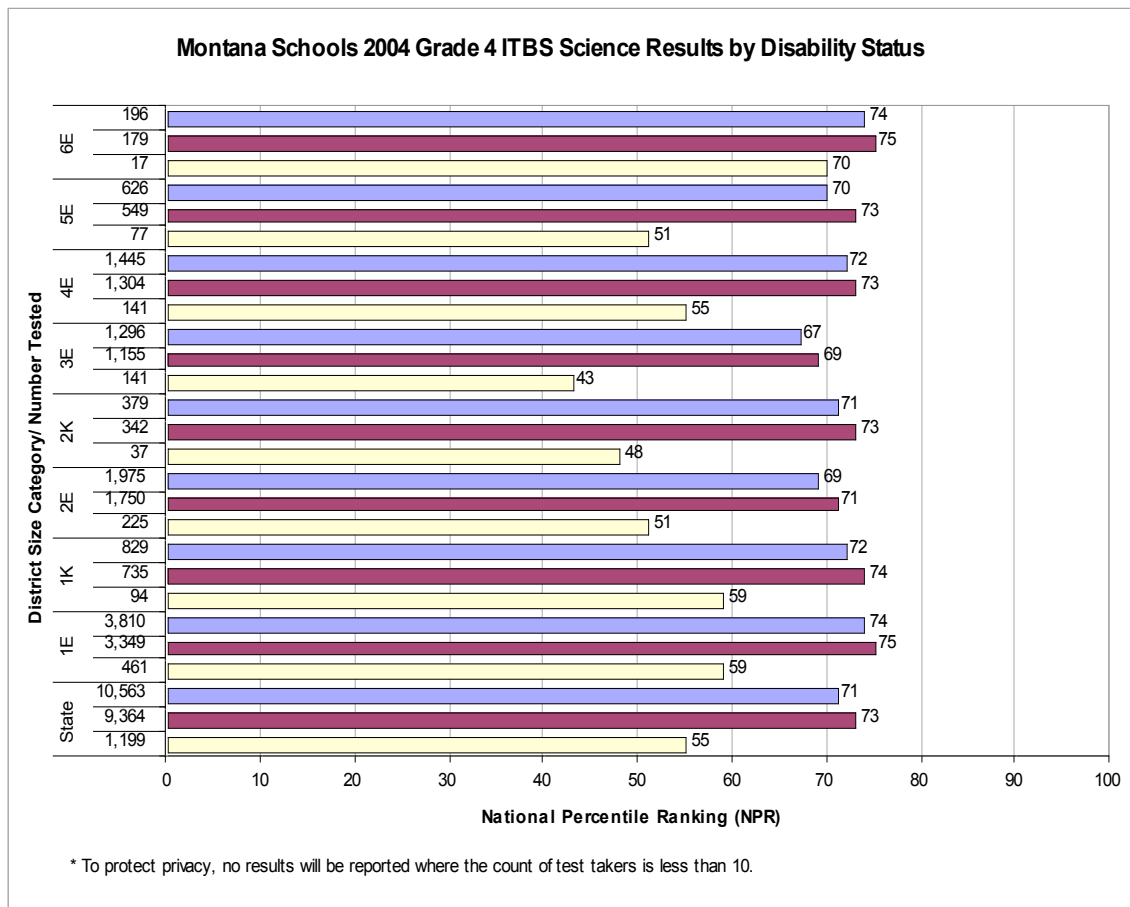
	<b>Total Montana Students</b>	<b>White Montana</b>	<b>Native American Montana</b>
2001	6,641	5,699	319
2002	6,368	5,460	300
2003	6,470	5,514	282

**Table 5: 4, 8, 11 SC**

NAEP data from 1994 and 1998 are included to add to the picture of student achievement in Science. Although NAEP data give us another perspective to the picture of Montana students tested in these years, it is not a statewide assessment, but rather a representative random sampling of the students in 4<sup>th</sup> and 8<sup>th</sup> grades in the years identified.

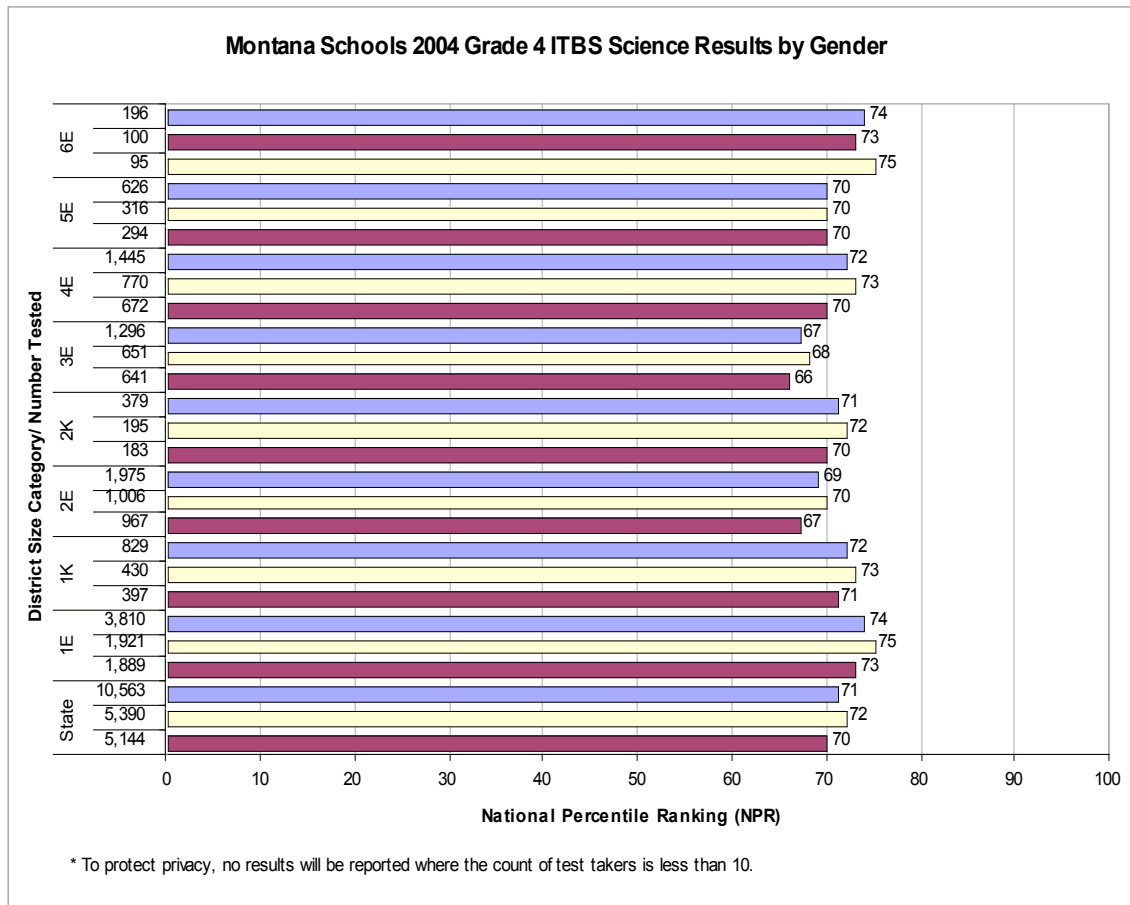
<b>SCIENCE AVERAGE SCALE SCORES</b>							
<b>Grade</b>	<b>Year</b>	<b>All National</b>	<b>All Montana</b>	<b>White National</b>	<b>White Montana</b>	<b>Native American National</b>	<b>Native American Montana</b>
4	2000	148	160	159	164	139	145
8	1996	148	162	159	166	148	139
8	2000	149	165	160	168	132	143

**Chart 4.1 SC**



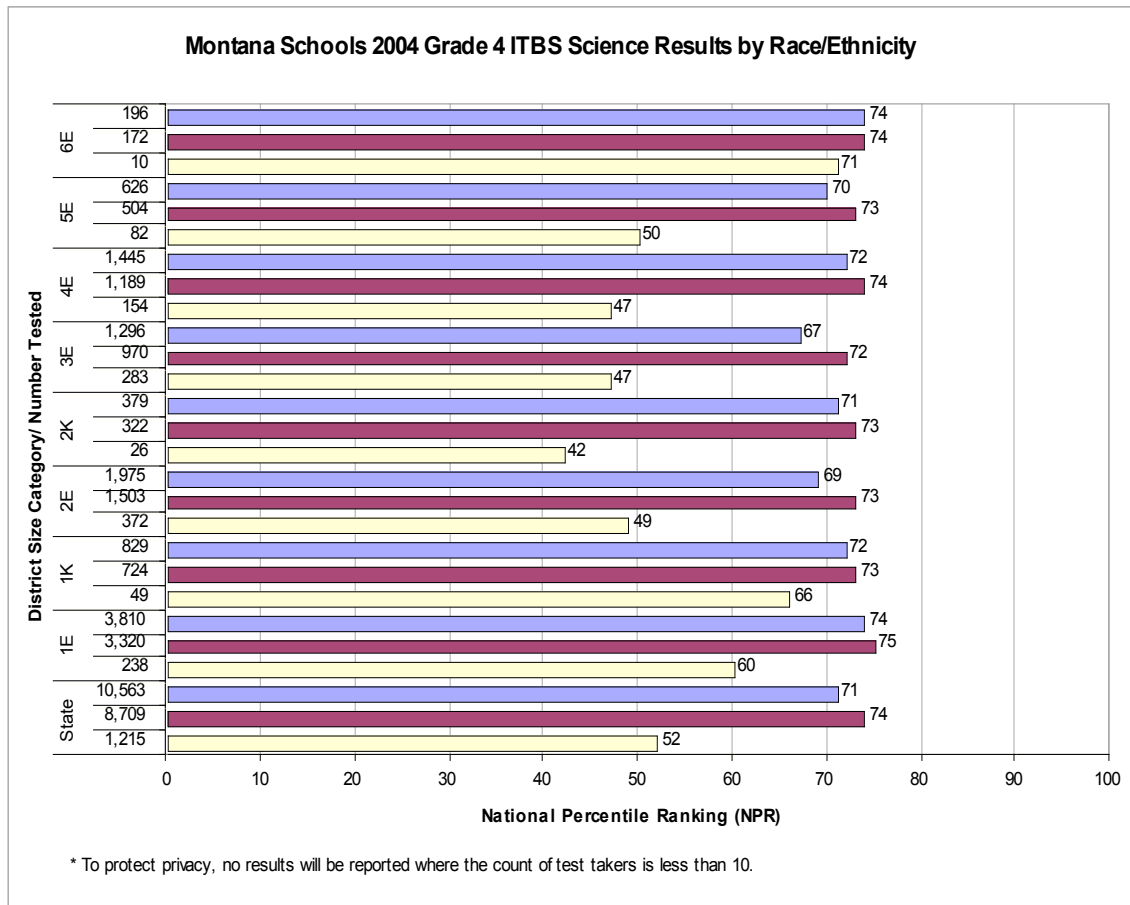
1. All students
  - The Science NPR for all Montana grade 4 students is 71%, one percentage point above 2003.
2. Students without disabilities
  - Statewide, the NPR for students without disabilities is 73%, one percentage point above 2003. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Students with disabilities
  - Statewide, the NPR for students with disabilities is 55%, four percentage points above 2003. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 3E with an NPR of 43% and 2K and 6E where the number of students tested is too small for comparisons..
4. Comparisons
  - Statewide, Montana students without disabilities scored 18 percentage points above students with disabilities, 73% and 55% respectively. That number is relatively stable.

**Chart 4.2 SC**



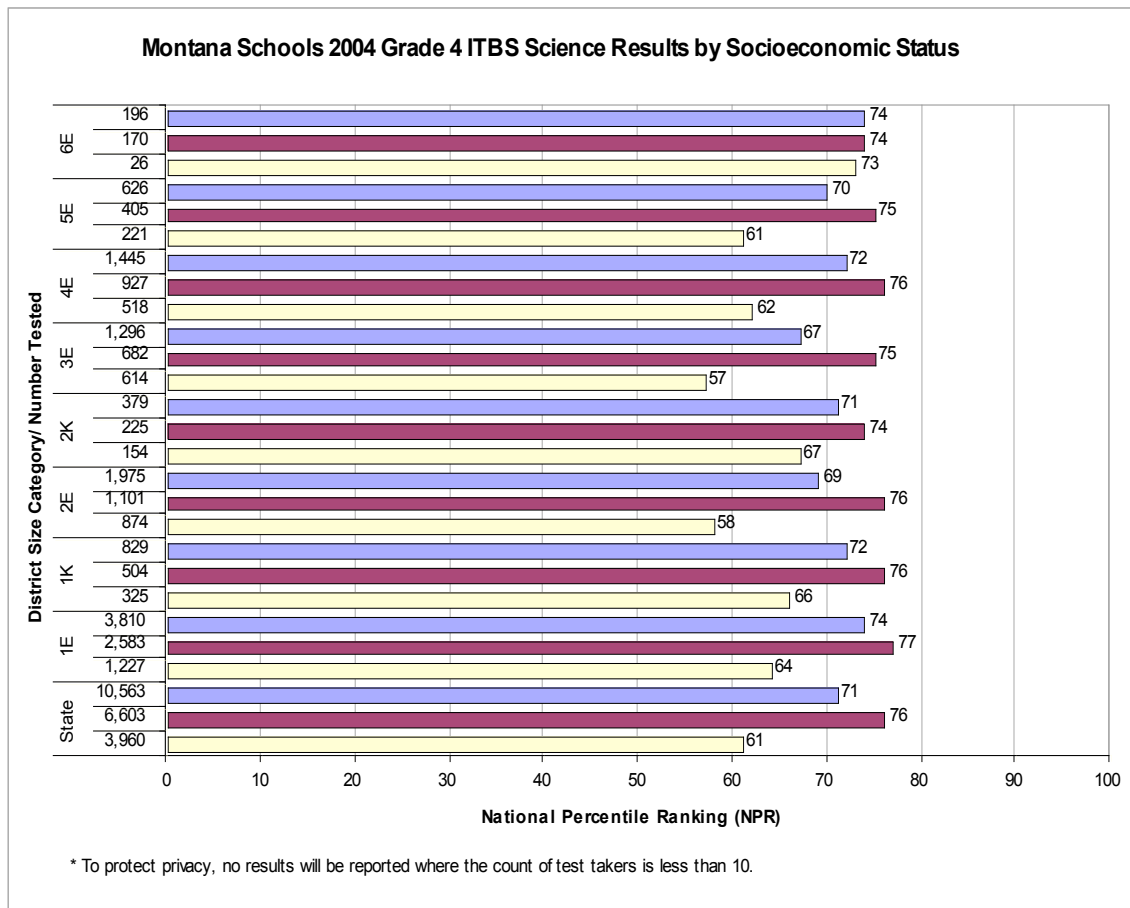
1. All students
  - The Science NPR for all Montana grade 4 students is 71%.
2. Female students
  - Statewide, the NPR for female students is 70%, the same as in 2003. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Male students
  - Statewide, the NPR for male students is 72%, two percentage points above 2003. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
  - Statewide, male students scored two percentage points higher than female students, 72% and 70% respectively. That number is stable across the state.

**Chart 4.3 SC**



1. All students
  - The Science NPR for all Montana grade 4 students is 71%.
2. Native American students
  - Statewide, the NPR for Native American students is 52%, four percentage points above 2003. That number is relatively stable across the state with most district size categories plus or minus 4-6 percentage points except 1E with an NPR of 60% and 1K, 2K, and 6E where the number of students tested is too small for comparison.
3. White students
  - Statewide, the NPR for White students is 74%, one percentage point above 2003. That number is stable across the state with all district size categories plus or minus 2 percentage points.
4. Comparisons
  - Statewide, White students scored 22 percentage points above Native American students, 74% and 52% respectively. That number is relatively stable.

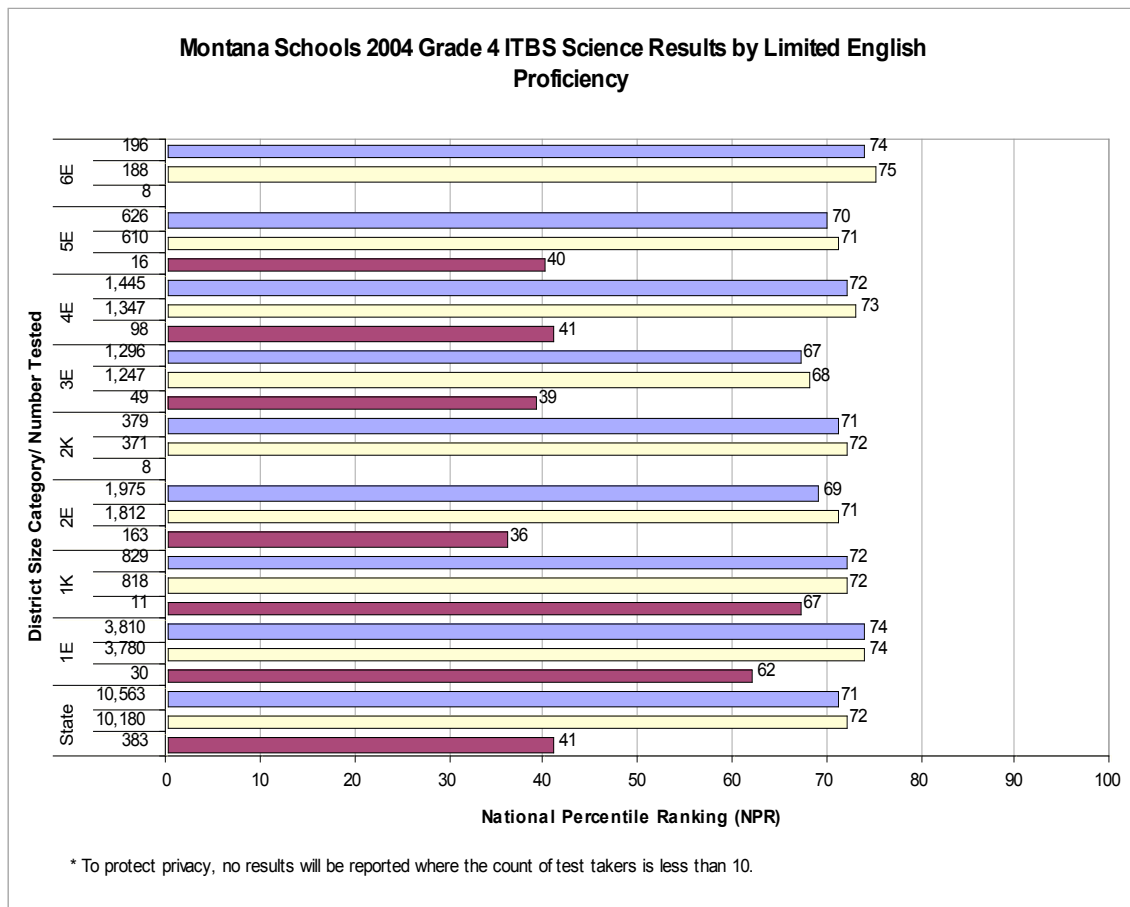
**Chart 4.4 SC**



1. All students
  - The Science NPR for all Montana grade 4 students is 71%.
2. Students participating in free/reduced lunch programs
  - Statewide, the NPR for students participating in free/reduced lunch programs is 61%, one percentage point above 2003. That number is stable with all district size categories plus or minus 2-4 points except 6E where the number of participating students tested is too small for comparisons.
3. Comparisons
  - Statewide, all Montana students scored ten percentage points above participating students, 71% and 61% respectively.

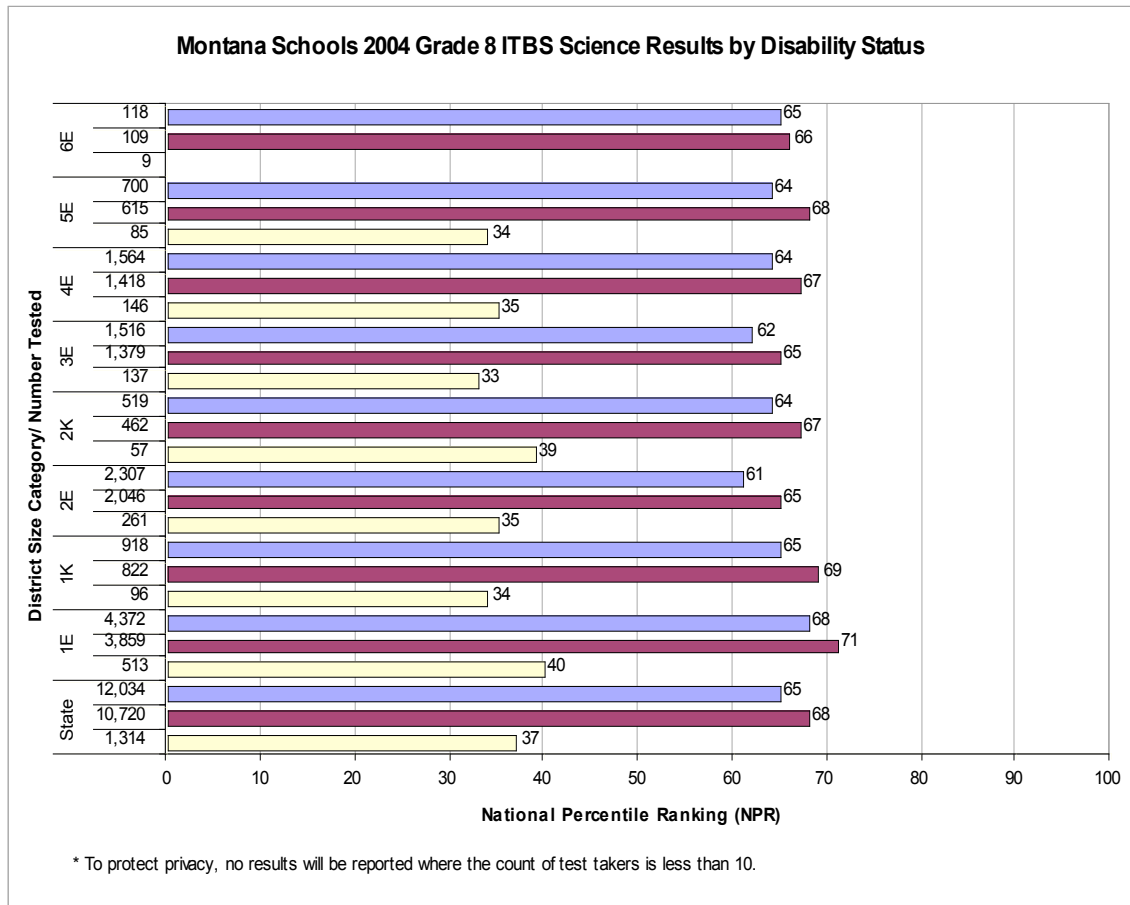


**Chart 4.5 SC**



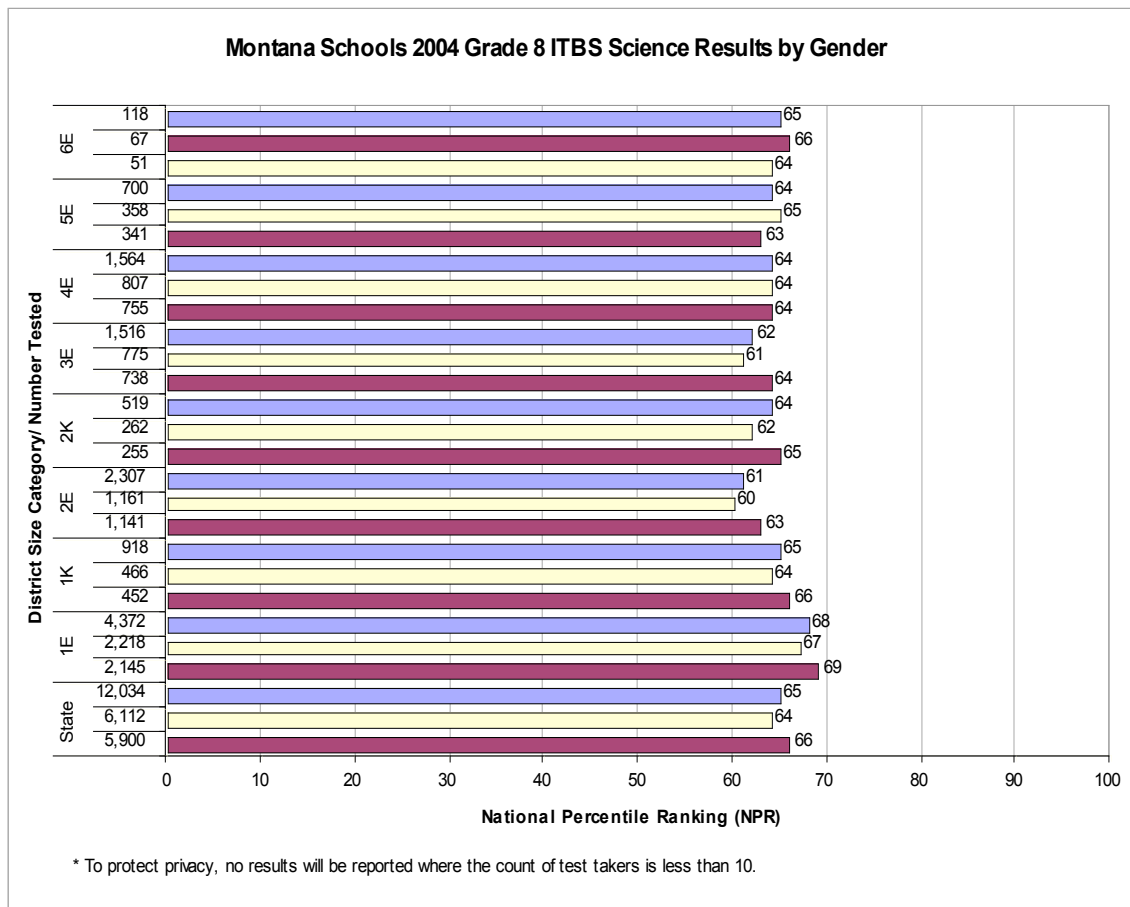
1. All students
  - The Science NPR for all Montana grade 4 students is 71%.
2. Students with limited English proficiency (LEP)
  - Statewide, the NPR for LEP students is 41%, eight percentage points above 2003. The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.
3. Comparison
  - Statewide, all Montana students scored 30 percentage points higher than limited English proficient students, 71% and 41% respectively. That number varies among school size categories because of the wide variation in the number of LEP students tested.

**Chart 8.1 SC**



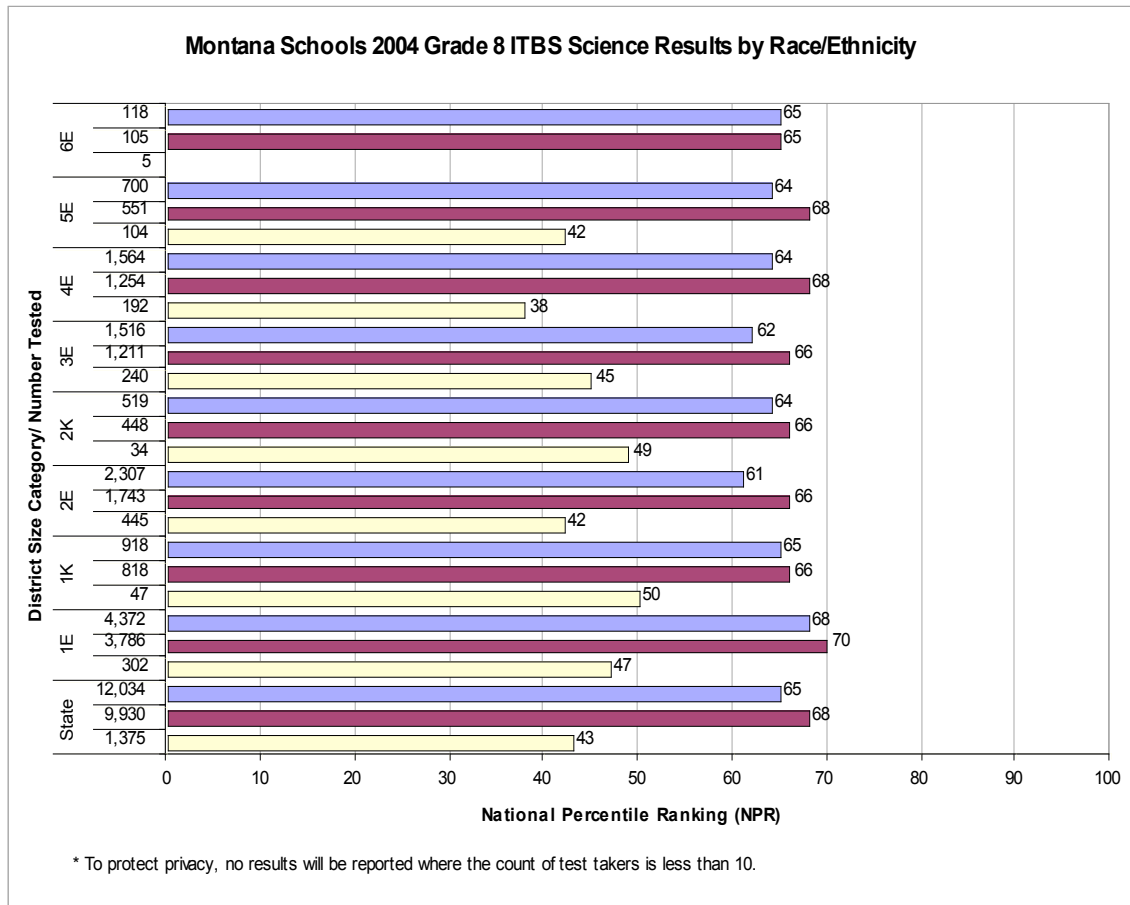
1. All students
  - The Science NPR for all Montana grade 8 students is 65%, one percentage point higher than 2003.
2. Students without disabilities
  - Statewide, the NPR for students without disabilities is 68%, one percentage point above 2003. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Students with disabilities
  - Statewide the NPR for students with disabilities is 37%, two percentage points above 2003. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
  - Statewide, Montana students without disabilities scored 31 percentage points above students with disabilities, 68% and 37% respectively.

**Chart 8.2 SC**



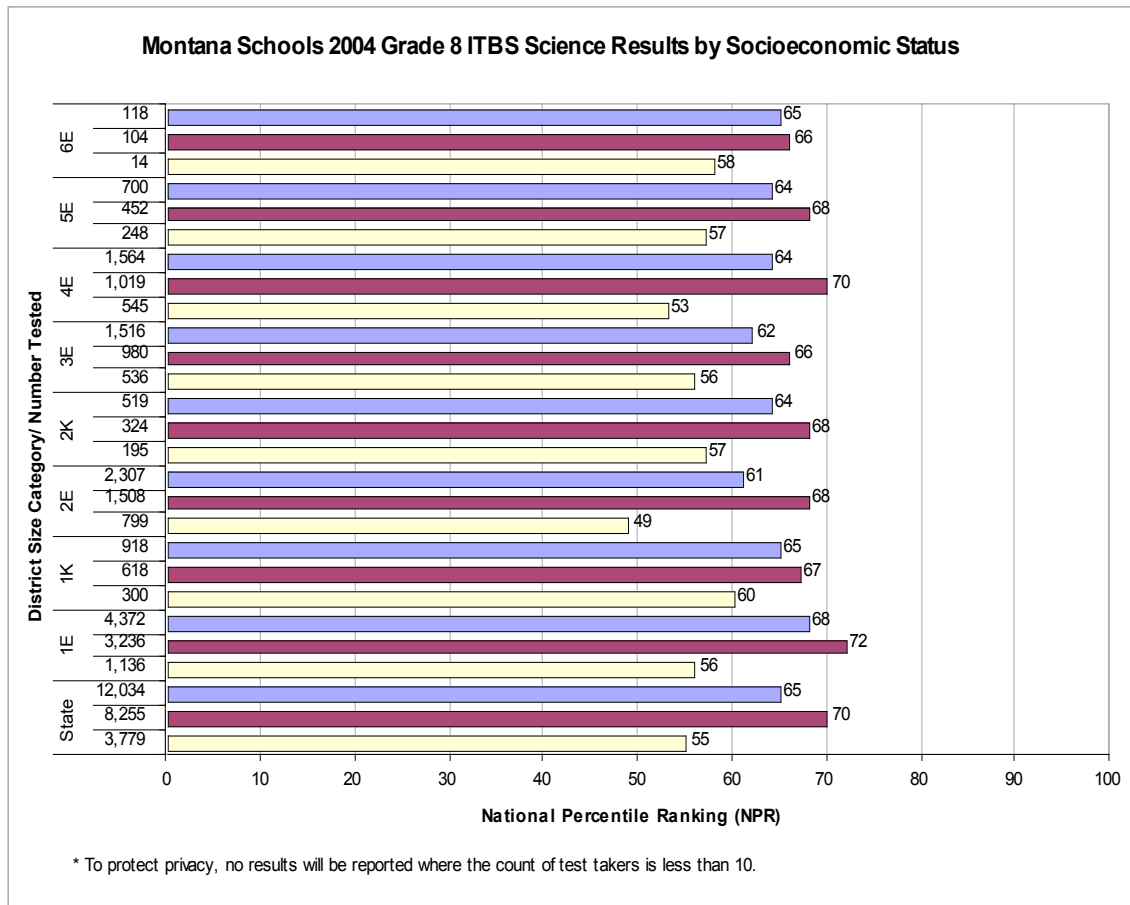
1. All students
  - The Science NPR for all Montana grade 8 students is 65%.
2. Female students
  - Statewide, the NPR for female students is the same as in 2002 and 2003, 66%. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Male students
  - Statewide, the NPR for male students is the 64%, two percentage points above 2003. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
  - Statewide, female students scored two percentage points above male students. 66% and 64% respectively.

**Chart 8.3 SC**



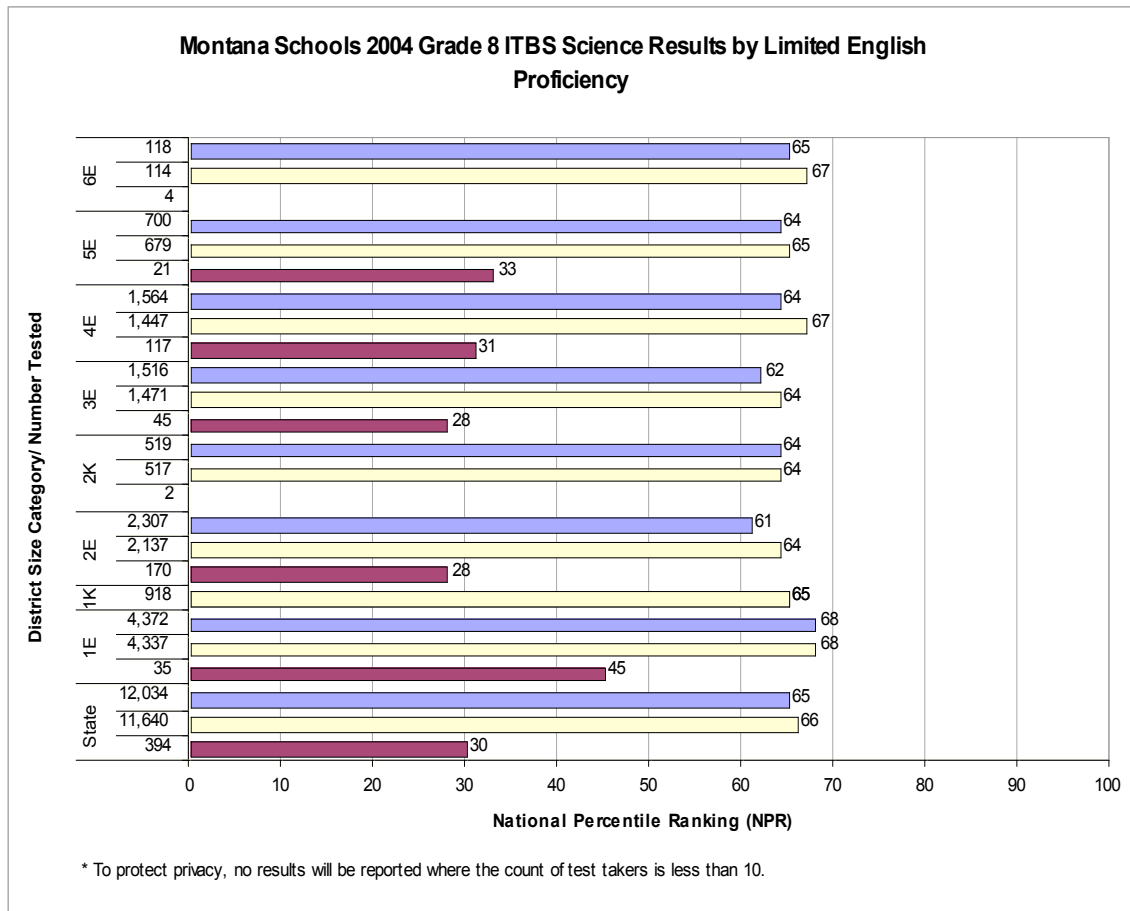
1. All students
  - The Science NPR for all Montana grade 8 students is 65%.
2. Native American students
  - Statewide, the NPR for Native American students is 43%, the same as in 2003. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 4E where Native American students tested scored 38% and in 1K and 2K where the number of students tested is too small for comparisons.
3. White students
  - Statewide, the NPR for White students is 68%, one percentage point above 2003. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
4. Comparisons
  - Statewide, Montana White students scored 25 percentage points above Native American students, 68% and 43% respectively.

**Chart 8.4 SC**



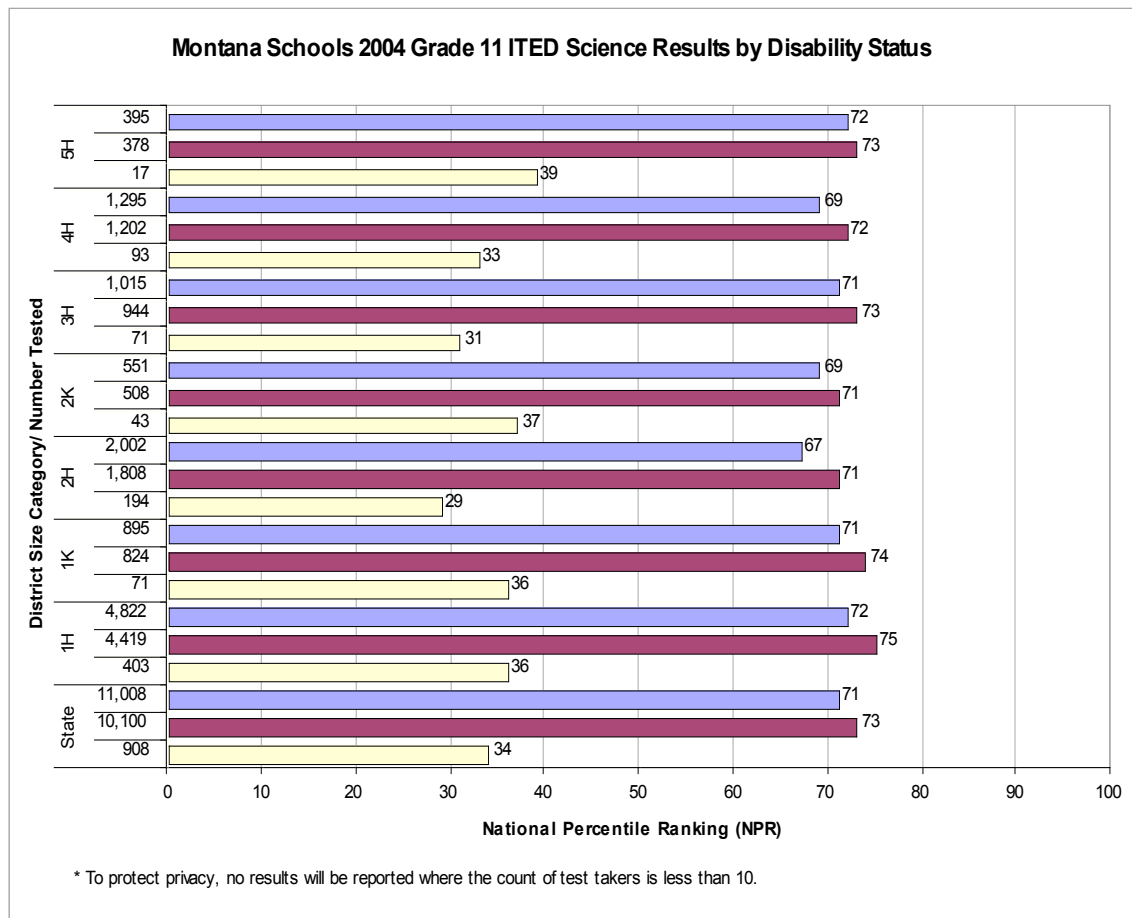
1. All students
  - The Science NPR for all Montana grade 8 students is 65%.
2. Students participating in free/reduced lunch programs
  - Statewide, the NPR for students participating in free/reduced lunch programs is 55%, three percentage points above 2003. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except 1K with 60% and 2E with 49%.
3. Comparisons
  - Statewide, all Montana students scored ten percentage points above students participating, 65% and 55% respectively. That number is relatively stable.

**Chart 8.5 SC**



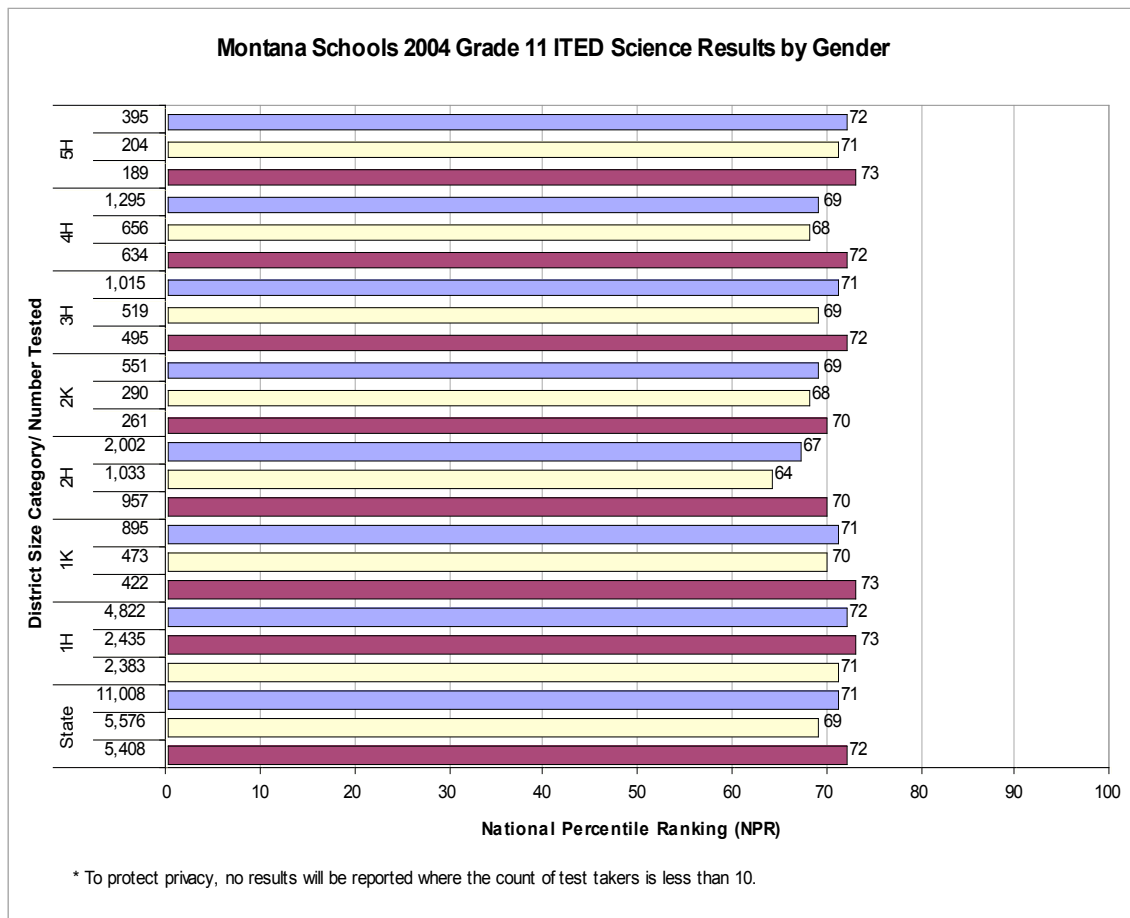
1. All students
  - The Science NPR for all Montana grade 8 students is 65%.
2. Students with limited English proficiency (LEP)
  - Statewide, the NPR for LEP students is 30%, one percentage point above 2003. The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.
3. Comparison
  - Statewide, all Montana students scored 35 percentage points higher than limited English proficient students, 65% and 30% respectively. That number varies among school size categories because of the wide variation in the number of LEP students tested.

**Chart 11.1 SC**



1. All students
  - The Science NPR for all Montana grade 11 students is 71%, one percentage point above 2003.
2. Students without disabilities
  - Statewide, the NPR for students without disabilities is the same as in 2002 and 2003, 73%. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Students with disabilities
  - Statewide the NPR for students with disabilities is the same as in 2002 and 2003, 34%. That number is stable across the state with most district size categories plus or minus 2-4 percentage points except 2H which with an NPR of 29% and 5H where the number of students tested is too small for comparison.
4. Comparisons
  - Statewide, students without disabilities scored 39 percentage points above students with disabilities, 73% and 34% respectively.

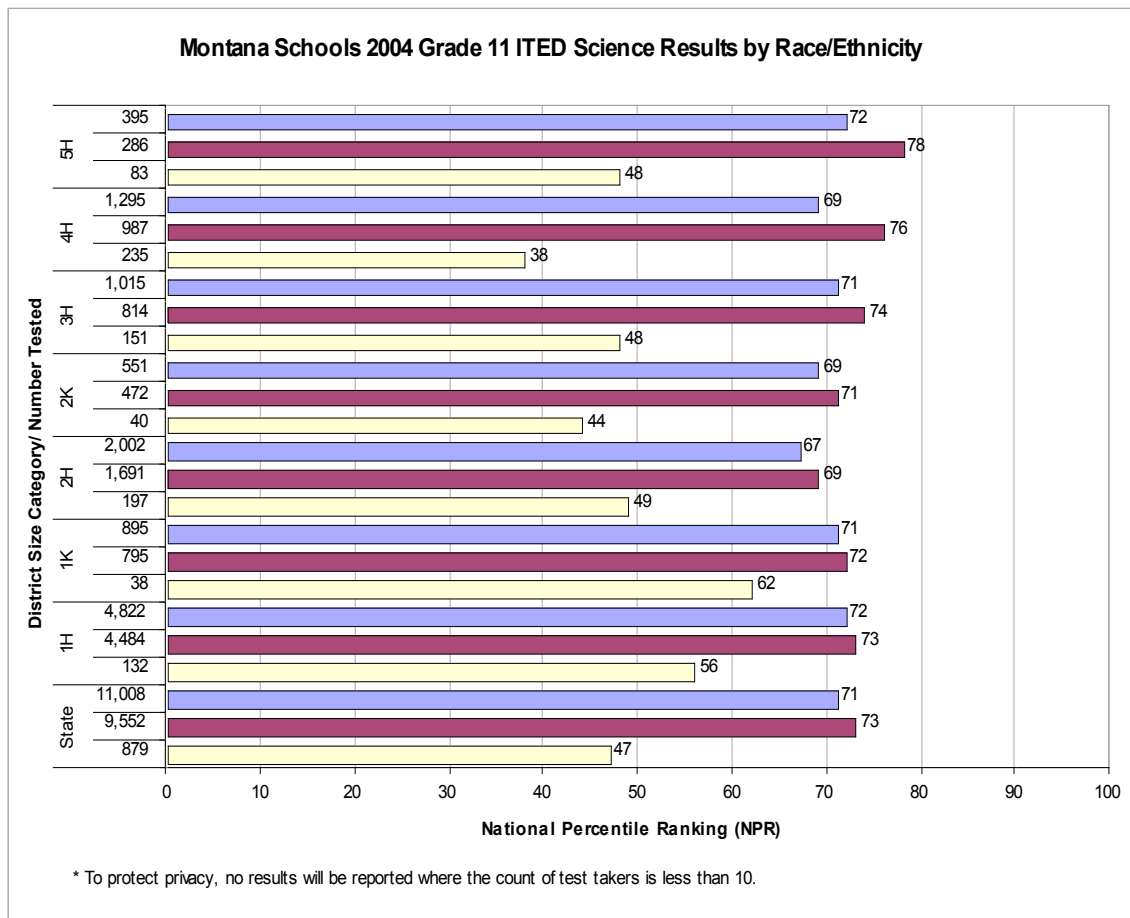
**Chart 11.2 SC**



1. All students
  - The Science NPR for all Montana grade 11 students is 71%.
2. Female students
  - Statewide, the NPR for female students is 72%, one percentage point lower than 2003. That number is stable across the state with all district size categories plus or minus 2-4 percentage points.
3. Male students
  - Statewide, the NPR for male students is 69%, one percentage point above 2003. That number is relatively stable across the state with all district size categories plus or minus 2-5 percentage points.
4. Comparisons
  - Statewide, female students scored three percentage points above male students, 72% and 69% respectively.

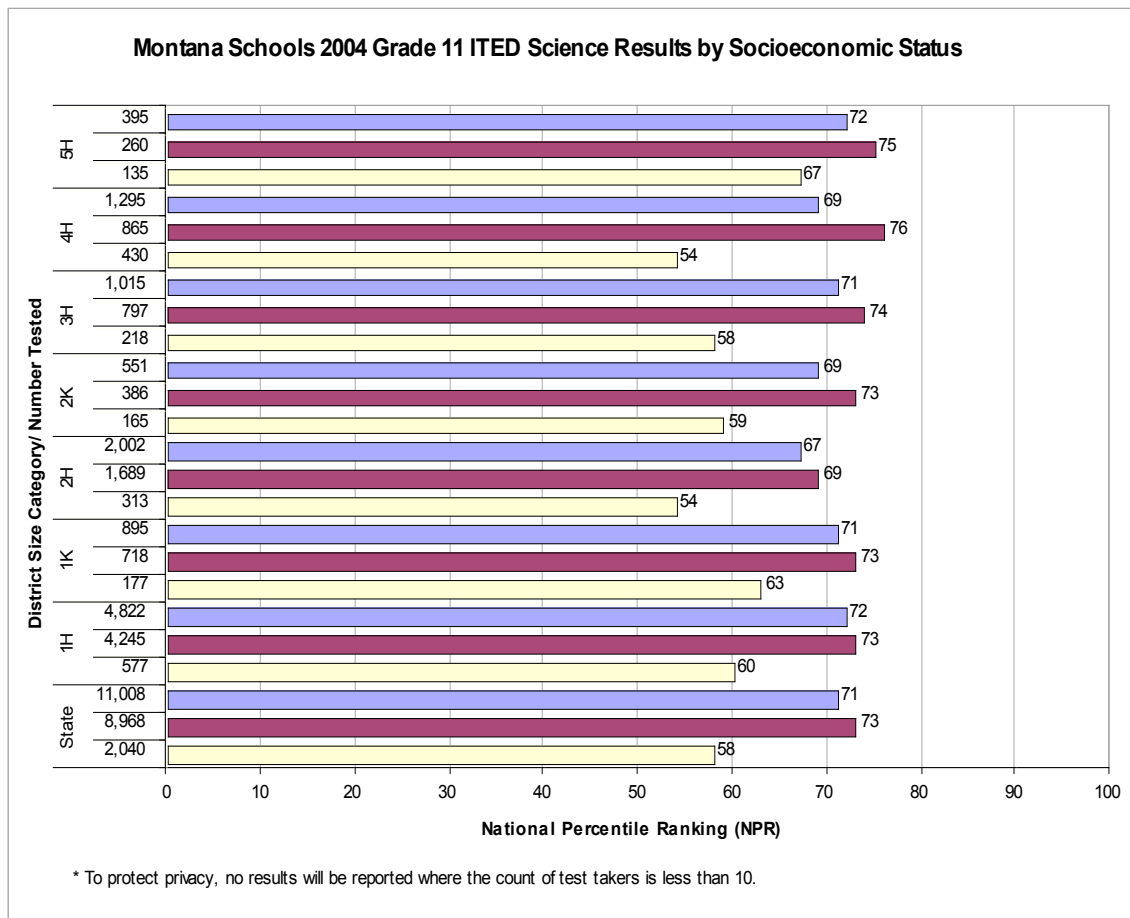


**Chart 11.3 SC**



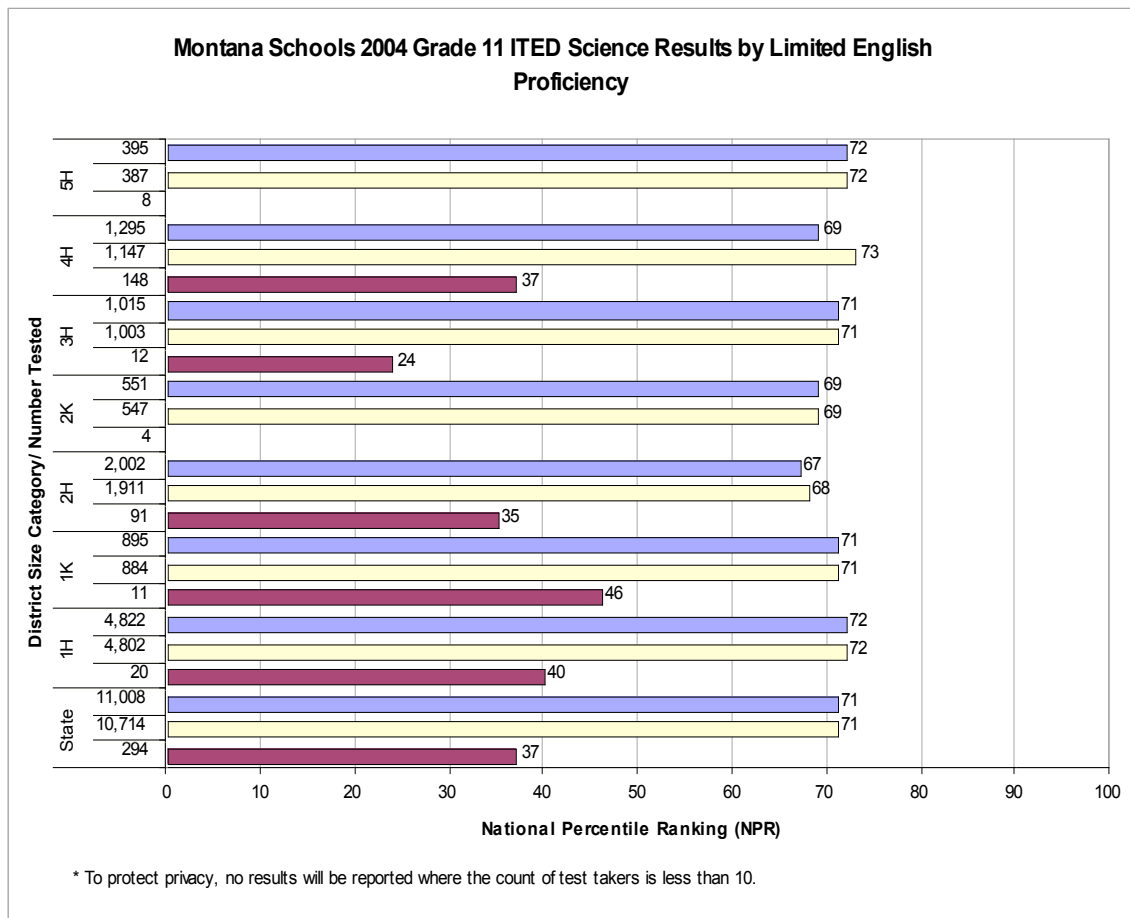
1. All students
  - The Science NPR for all Montana grade 11 students is 71%.
2. Native American students
  - Statewide, the NPR for Native American students is 47%, one percentage point above 2003. That number is relatively stable across the state with most district size categories plus or minus 2-4 percentage points except in size categories 1H where the NPR is 56%, 4H, 38%, and in 1K where the number of students tested is too small for comparisons.
3. White students
  - Statewide, the NPR for White students is 73%, the same as in 2003. That number is stable across the state with all district size categories plus or minus 2-4 percentage points except in size category 5H where the NPR for White students tested is 78%.
4. Comparisons
  - Statewide, Montana White students scored 26 percentage points above Native American students, 73% and 47% respectively. That number is relatively stable.

**Chart 11.4 SC**



1. All students
  - The Science NPR for all Montana grade 11 students is 71%.
2. Students participating in free/reduced lunch programs
  - Statewide, the NPR for students participating in free/reduced lunch programs is 58%, one percentage point below 2003. That number is relatively stable with most district size categories plus or minus 2-4 percentage points except in size categories 1K and 5H where participating students tested scored 63% and 67% respectively.
3. Comparisons
  - Statewide, all Montana students scored thirteen percentage points above participating students, 71% and 58% respectively. That number is relatively stable.

**Chart 11.5 SC**



1. All students
  - The Science NPR for all Montana grade 11 students is 71%.
2. Students with limited English proficiency (LEP)
  - Statewide, the NPR for LEP students is 37%, four percentage points below 2003. The NPR scores vary among school size categories because of the wide variation in the number of LEP students tested.
3. Comparison
  - Statewide, all Montana students scored 34 percentage points higher than limited English proficient students, 71% and 37% respectively. That number varies among school size categories because of the wide variation in the number of LEP students tested.